

# A REPLY

TO

"A BRIEF ANALYSIS OF A PART OF THE LAST ANNUAL REPORT  
OF THE BOARD OF DIRECTORS AND CHIEF ENGINEER OF  
THE SANDY AND BEAVER CANAL COMPANY."  
PUBLISHED BY JOSHUA MALIN.

I have recently been handed a circular, purporting to be "a brief analysis of a part of the last Annual Report of the Board of Directors and Chief Engineer of the Sandy and Beaver Canal Company," signed Joshua Malin. Prior to replying to the numerous falsehoods and misstatements, with which this article is pregnant, it is necessary that I should furnish a brief synopsis of the connexion that has existed between Mr. Malin, the Canal Company and myself; the cause of its dissolution, and a short outline of his character, from which the public will be enabled to judge how little confidence is to be placed in his assertions or integrity. So far as my own reputation is concerned or affected, by the malicious and slanderous attacks of Mr. Malin, I deem a reply unnecessary and uncalled for; but as his circular may find its way into the hands of persons unacquainted with the facts relative to the management of the affairs of the Canal Company, and operate prejudicially to its interest, a reply may be necessary.

In the year 1828, Mr. Malin surveyed and examined the route of the Sandy and Beaver Canal, under the Direction of Major Douglass, who states in his report to the Canal Company, that the estimates of the cost of the work, were predicated upon the measurement and surveys of Mr. Malin. As some doubts existed in relation to the adequacy of the supply of water on the summit, Mr. Hage and myself were employed by the Directors, in the fall of 1834, to examine the summit level and report on *that subject*. The Directors and Stockholders generally, having entire confidence in the accuracy of Major Douglass' estimates, required from us no other examination. Shortly after our report had been made, which was favorable and satisfactory, the Directors placed a portion of the summit level near Hanover, under contract. Mr. Malin was employed by them to locate and superintend its construction, and at that time determined, by direction of the Directors, the level of the summit, which has never since been changed.

In the spring of 1835, Eastern capitalists having embarked largely in the stock of the Company, and having expressed an unwillingness that their funds should be placed at the disposal, or under the control of Mr. Malin, in whom they had no confidence, I was called on by the Directors to take charge of the work as their Engineer, and entered upon the duties of my appointment in May. The Directors, feeling anxious that the work should go on without delay, had, prior to my arrival on the line, directed Mr. Malin to locate and prepare for contract, some miles on the eastern and western divisions, which were let before I had an opportunity of viewing and examining them, the location of which I afterwards found it essentially necessary to change, in order to prevent a useless expenditure of money, a great loss of water by leakage, and my own reputation from being injured as an Engineer. The most important of these alterations were on sections No. 7, 17 and 19, on the eastern, and from No. 8 to 14 on the western division, (see certificates A. and B.) These alterations engendered the ill will of Mr. Malin towards me.

I had been but a few days engaged on the line, and had not yet organized the corps of Engineers, when Mr. Malin called on me and asked in what capacity he

was to serve—and if we should not act in like and similar situations; he to take charge of one party, myself another, and make as it were, a partnership work of it. I replied to him, no: that I should select for him a corps of Engineers, and give him the direction of a division of the line, when other duties of a more pressing nature were performed. He made but little reply, but I then distinctly perceived his vanity and ambition were touched, and that I had rendered myself the object of his animadversion.

Shortly after this, I requested him to examine and locate the remainder of the eastern division, not then under contract, which duty he performed, but the time allowed for its accomplishment being limited, the resident assistant afterwards made various salutary changes in the location, which, on being approved of by me, added new fuel to the flame.

I then gave him charge of the middle, and a small portion of the eastern and western divisions—the work on which, being nearly all excavation and embankment, required but little skill on the part of the assistant, beyond that of a knowledge of plain and simple mensuration: he had been but a short period employed on these divisions, till I found it necessary to speak to him repeatedly, in relation to the inaccuracy of his calculations, more particularly as to the numerous errors in the *additions* of the monthly estimates. These were circumstances, however, that could be guarded against, and I felt disposed to submit to them, knowing that Mr. Malin had taken an active part when the Canal was first projected, in advocating and bringing it to notice. New difficulties, however, of a more serious nature, soon presented themselves—the “adder became warned into existence”—the man whose errors I felt disposed to overlook, I ascertained, was giving directions to the contractors relative to the manner of doing their work, entirely at variance with mine to him and them, and in fact, was in the constant habit of endeavoring to create a scism between myself and them, that he believed would operate eventually to his advantage and my injury.

In numerous instances where I had directed work to be constructed in a specific manner, he has in my absence suffered the contractors to do it otherwise—intimated to them that I was too particular, and that a variation from my directions was a matter of no importance. Various instances have occurred, of his having complained, without the least cause, of contractors, for refusing and neglecting to perform their work as instructed, and when he could have no other object in making those complaints, than to cause me to reprimand the contractors unnecessarily, and thereby become the object of their dislike. In one instance he informed me that Mr. Robert Stewart, one of the contractors, had positively refused to obey an order which I had sent him, in relation to his work, by Mr. Malin. Knowing him to be a faithful contractor, I was surprised, and immediately addressed him a note on the subject; on receipt of which he called and assured me that Mr. Malin's statement was false and without the least foundation whatever, and that Mr. Malin would not dare make the assertion in his presence. Mr. Stewart I knew to be a man of veracity and integrity, and thought that a favorable opportunity to detect Mr. Malin in his aberrations, and appointed a time to meet Mr. Stewart, in presence of Mr. Malin, for that purpose: they met, but Mr. Malin would not renew his assertion in Mr. Stewart's presence. Cases of a similar nature were of frequent occurrence, though not so strongly marked.

In the spring of 1836, business of the Company required my presence in Philadelphia: on my return, Mr. Stewart, one of the contractors for the western deep cut, which was on Mr. Malin's division, complained to me that he thought his work was not correctly measured. I had repeatedly, before this, cautioned Mr. Malin in relation to that work, it being a heavy and important contract, and always received from him the most positive assurances of the accuracy of his estimates. I again, however, questioned him relative to it, told him of Mr. Stewart's doubts, and



received from him an unqualified declaration, that the measurements and estimates were strictly correct. Thinking that the case might not be as represented by Mr. Malin, I caused another assistant to make the next monthly measurement and estimate of this work, which brought to light *the astonishing fact, that Mr. Malin had allowed to the contractors, unknown to the directors or myself, about fifty thousand cubic yards of excavation, which they had not done, or near eight thousand dollars more than they were entitled to, (see certificate C.)* After being detected in this iniquitous transaction, he called on me to apologize for his conduct—said he had made this erroneous and false estimate on his own responsibility, *without the knowledge of any Director:* admitted its great impropriety, and asked me to overlook it, under a pledge of better behaviour in future; on this assurance, I improperly retained him in the Company's service, under the impression that he might reform; and as I now fully understood his character, I might be able to guard against his delinquencies. But a short period, however, had elapsed, before another error, similar to the last, was discovered in the measurement on section No. 11, (see certificate C.) This I deemed unnecessary to mention to him, and immediately took steps to guard against a further repetition of such acts, by directing the sub-assistant to make the measurements. One piece of work, I still left under his sole direction: I allude to the tunnel, and even there he returned a false estimate to the amount of about \$400. At this period which was in the fall of 1836, I learned from respectable sources, that he was propagating statements that I was in the habit of altering and reducing the estimates of work done by the contractors, after they had been returned to me by the assistant Engineers. Feeling "that forbearance was no longer a virtue," and though individually I might overlook his injuries, I was not authorized to do so officially, I concluded to dismiss him, and informed him by letter that his services were no longer required. Some days after this, he called to know the cause of his dismissal, and stated that if there were any accusations against him, he wished to be confronted with his accuser. I conceived his request, after such glaring impropriety of conduct on his part, preposterous, and made but little reply. He then sent a committee, composed of Messrs. Begges, Green and Hanna, for the purpose of ascertaining whether I would not reinstate him, (see certificate marked D which I positively refused.) Here ended our connexion.

Having given a brief outline of Mr. Malin's conduct while in the employ of the Company, it now remains for me to refute some of the most important assertions contained in his brief analysis. He says "he does not see why the Report of Major Douglass should be brought into notice by the Directors in their late Annual Report," when alluding to the increased cost of the work, "because they have had several annual reports from their present Chief Engineer, and one special report on the 11th Nov. 1835.

Now I can readily explain why Major Douglass' report was alluded to, and perhaps had the allusion been made in less modest terms, an explanation would not now be requisite. I have before stated, that Major Douglass made a Report and estimates of the probable cost of the Canal—or rather, that Mr. Malin, under his direction, made the field notes and calculations, as Major Douglass spent but a very short period on the line, and that he based his report and estimates on those notes and calculations of Mr. Malin. This was the only estimate *of the probable cost of the work.* Directors had received from any Engineer till December last, when I made a minute and careful estimate of the amount required to complete the work, and then the startling fact was divulged, that the amount estimated by Major Douglass as sufficient to complete the work, would not much more

than defray one half the cost. On Major Douglass' estimate, prior to the completion of the estimate above alluded to, the directors and myself had predicated our views as to the cost of the work, and on that account his estimate and report were alluded to.

Mr. Malin lays much stress upon my report of November 11, 1835, and evidently endeavors, by misquotation, to construe it into an estimate of the cost of the work. He states that "on the 11th Nov. 1835, previous to an application for a loan, the Chief Engineer made a report to the Directors in which he states that during the past summer the line has been carefully traced with a view to its final location, and it was ascertained the cost of the Locks would not exceed \$700 per foot lift, the cost of the Dams in the average \$28 per foot linear across the stream, and the line generally from 3000 to \$5000 per mile." Now by reference to that report, it will be seen that his quotation is incorrect, and intended to mislead, but the artifice is as shallow as the design is base. The report states "the work *placed under contract* is, in most instances, in the hands of responsible and efficient men, and *has been taken* on terms exceedingly favorable to the company. The cost of the Locks, which *are built* in the most durable manner, of cut sand stone, will not exceed \$700 per foot lift. The cost of the dams, which are in most instances 14 feet high, will average about \$28 per foot linear across the stream, and the canal generally from \$3000 to \$5000 per mile," having allusion alone to the work then under contract or completed, which constituted but a small portion of the entire line—the remainder of the work which has since been placed under contract, could not be disposed of to responsible contractors, without an advance of about 50 per cent on those prices.

Mr. Malin, in his statement relative to the tunnel contract, insinuates that favoritism was shown by me towards one of the contractors, but contradicts himself in nearly the same sentence, by attempting to exhibit injustice on my part, in declaring the work abandoned. In reply to his insinuation of favoritism, I defy him or any other person to substantiate the charge. As to my official transactions with, or treatment of, contractors, I have in all cases endeavored to cause them to comply with the true intent and meaning of their contracts. If they obligated themselves to perform impossibilities, there was no discretionary power vested in me to absolve them, and to assume such responsibility, I conceive, would be trifling with the trust committed to my charge. But other matters are connected with the tunnel, which Mr. Malin has not thought proper to disclose, and which have no doubt led him to make some of the reports and complaints relative to the contractors which he alludes to. Mr. Malin was exceedingly anxious to have that work constructed without the aid of a contractor—or in other words, that the canal company should have it done by their own superintendants and laborers, and that he should have the direction and charge of it—and during my absence in the winter of 1835, he contrived to have a force of that description placed on the work, under direction of a superintendent. On my return I discovered that the work was costing the Company double its real value, and at my instance it was let to the persons he alludes to, at fair and reasonable prices: it is but justice to them to state, they came well recommended from sources entitled to credit.

His statement in relation to the Cold Run Reservoir mound, is but of lit-



the importance; it is, however, erroneous. The cause of that work costing less than the estimate made by Mr. Hage and myself, is not consequent on an alteration of the location, as he asserts, as the quantity of embankment is about the same in either location, but it was occasioned by the embankment being contracted for at a less sum per cubic yard, and by a change in the general plan of the work, with which he had nothing to do. Had the mound been constructed as at first located the result would have been the same.

Alluding to the West Fork reservoir mound, he says—"No alteration has ever been made in it since *I first* staked it out for contract." Nor do I, in my report, as he attempts to show, say that any alteration was made in it since *he* first staked it out; but I do say that it is 8 1-2 feet higher than originally planned and determined on by Mr. Hage and myself, and I defy Mr. Malin, not to *assert*, but to *prove*, to the contrary. What further evidence is requisite to substantiate this assertion, than the fact of its containing more than double the quantity of water the reservoir we planned would have contained.

Mr. Malin asserts that the present level of the summit is but one foot and forty hundredths higher than the level run by Mr. Hage and myself, and then attempts to prove that my statement, that the present level of the summit is 4 1-2 feet higher than the level run by Mr. Hage and myself, is not correct. He, however, commits himself, as will be observed by examination. He states that our level was intended to have 7 feet depth of water; that he raised the top water line 1 foot and 40 hundredths higher than ours; this added to the 7 feet, originally intended, makes 8.40: he then says that the present level is to have but 4 feet depth of water. Now if we deduct 4 from 8.40, we have a difference of 4.40, or very nearly 4 1-2 feet. In *his testimony*, given at Hanover, when he was questioned on this subject, he replied, "that the present level, as finally fixed, is 4 feet and 40 hundredths higher than the level run by Gill and Hage." (See certificate E.)—This fully verifies the language of Scripture—"out of their own mouths shall ye condemn them." Mr. Malin in this paragraph remarks, that I take to myself the credit of raising the summit level and saving over one hundred thousand dollars. This is incorrect. By reference to my report, it will be observed that I state, "as the level of the summit was raised 4 1-2 feet higher than the level adopted by Mr. Hage and myself, in 1834"—not that *I* had raised it. Now the facts relative to this matter are—though I do not deem them of much consequence—that the level of the summit was raised this 4 feet and 40 hundredths, by order of the Board of Directors, at the suggestion of Mr. Morledge, an assistant Engineer, and they are entitled to the credit, and on them rests the responsibility, not Mr. Malin.

Mr. Malin's abusive attack upon the President, Directors and Secretary of the Company, I deem unworthy of notice; *they* are all known in the community in which they reside as men of *truth and integrity*, and if they have been, at any time, *duped* relative to the work, it would not be difficult to identify in him, the deceiver. He states that in consequence of his objecting to the directors, to the expenditure of large sums of money, in creating reservoirs, &c. he was deprived of the necessary assistance, and treated in an ungentlemanly and insulting manner. That he ever made the objections alluded to I have good reason to doubt—the other statements I

know to be erroneous. He had at all times a full compliment of assistants to perform the duties required of him. (See certificate C.) Had he been "treated in an ungentlemanly and insulting manner," why did he continue and suffer himself to be the object of such treatment? and why did he, after his dismissal, (See certificate D.) send a committee, requesting to be reinstated in a situation, where he, according to his own statement, could anticipate no better treatment than he had before received? What honorable man, what man of ordinary feelings, would have done so? But the facts are not as he alleges. He asserts that the level of the summit as determined on by Major Douglass, was higher, with 7 feet depth of water, than the bottom of the present level, and attempts to prove this assertion by the certificate of Mr. Williard, who is of opinion, that it is as Mr. Malin asserts, from the fact that he understood the western end of the summit level to terminate half a mile easterly of its present termination. By an examination of certificates F and G, it will be seen that Mr. Williard pointed out, in 1833, to the Philadelphia delegation and others, the western termination of the summit level, as determined by Douglass and Malin, and that the point exhibited by him, does not vary more than eight rods from its present termination. But had the lock been located as Mr. Williard represents, one half mile east of its present location, it does not follow that the level should have been higher on that account than it now is: the level may have terminated there for the purpose of avoiding the embankment now made between the two points. What its height was I cannot determine by any other data than *his own statements*, and if they are *at all to be relied on*, the present level is at least 4 1/2 feet higher than that of Major Douglass. In Douglass' report, page 19, he says that "the extreme height of the ridge above the line of the tunnel, is 120 feet" by his level—by the present it is 112 feet.

In the fall of 1834, when Mr. Hage and myself examined the summit, prior to our making any *levels or surveys*, Mr. Malin, who was deputed by the directors to point out to us the route and exhibit Douglass' plans, took us to what are termed the Beaver dam meadows, on the land of Judge Bowman; "here," said he, pointing to the ground on which we then stood, "we," meaning Douglass and himself, "commenced our level for the summit, the surface of this ground we called 8 feet above canal bottom, and 1 foot above top water line, the canal being intended to have 7 feet depth of water, and the surface of the water to be one foot below the meadow, for the purpose of preventing it from sustaining injury by floods." (See certificates H and I). The cutting at that point now, will not exceed 3 feet, making the present level about five feet higher than theirs.

Mr. Malin states that Judge Bowman, whose certificate in relation to the above conversation, is herewith given (marked I), is under a mistake, having understood *our level* to be as above described, not Douglass'. That this cannot be as he [Malin] asserts, is evident from the fact, that we [Hage and myself] had made no level at that time. As our instructions led us to examine the plan and level of the summit, as fixed by Major Douglass, we assumed the point shown us by Mr. Malin, as 8 feet above bottom, and traced our line over the summit, on nearly the same ground that Douglass had his, as pointed out by Mr. Malin. When we arrived at Hanover, a difference of about 12 feet was discovered, between Major Douglass' level and ours, as indicated by a bench mark near the town, or in other words, we made the bench nearly 23 feet above canal bottom, and found it marked but 11 feet and some hun-



dredths. I immediately, on discovering the difference, asked Mr. Malin where he thought the error lay, if the mistake was ours or his: he said he was satisfied that our level was correct, that it corresponded with his, but he presumed the boys, for mischief, had defaced and altered the true cutting originally marked on the bench by him. With this reply I did not feel satisfied, and stated the matter to some of the Directors: Mr. Potter, one of them, mentioned it to Mr. Malin, who replied that the result of our level and his were the same, and that he had marked the bench himself, *intentionally less than the cutting really was, for the purpose of deceiving the people of Hanover*, [see certificate K] as he believed, had they been aware of the depth of the cutting there, they would not have interested themselves about the canal. In this instance, after detection, he acknowledged that deception of the most flagrant kind was practised by him. Now let me ask, what credence should be given to the statements of a man that would resort to conduct of so degrading a nature? And is it reasonable to presume, that the man who would be guilty of such conduct, would not hesitate to dupe the Directors as to the true cost of the work.

Mr. Malin insinuates that my assertion, that but little injury has, thus far, been sustained on the line from floods [except the western deep cut,] is not correct, and attempts to magnify the injury into a large amount. By reference to the certificates of the assistant engineers, marked L. M. & N., it will be observed that the sum total, excepting the western deep cut, *will not exceed \$2460*. He endeavors also to induce a belief, that large amounts have been uselessly expended, in changes and alterations in the location. How far he is supported by facts, in his charge, will be seen by examining the statements of the assistant Engineers, marked B. O. and L., which furnish \$5518,90 *as the whole amount* expended in consequence of alterations, a large part of which was required, in order to correct his own unskilful locations, made prior to my arrival on the line: \$2000 of the entire expenditures was made by a resolution of the Board, to move dam No. 1, on the eastern division, from off the land of D. Harbaugh, on to the land of the Canal Company, for the purpose of securing the water power—and \$1403 of the amount, was in consequence of an excitement, created amongst the inhabitants of Gillford and vicinity, relative to the erection of a dam across the West Fork, below them, which, they feared, would render the neighborhood sickly, and injure their town. In order to remove their fears, and allay the excitement, the Board determined on changing the plan. Mr. Malin was at the time in the employ of the company, and, I have good reason to believe, was instrumental in creating the excitement; the plan objected to by the people of Gillford and vicinity, was one that would have saved the Canal Company an expenditure of at least \$15,000, but it was a deviation from his original design, and he feared it would interfere with *his private interests*, by slightly injuring a lot he had purchased a short time before for \$120. These were matters in his view, paramount to the interests of the company, for whose success he now pretends to feel so desirous.

He occupies much space in his remarks relative to turning the waters of Brown's and Ehrhart's Runs into the canal below Hanover, by means of a ditch as proposed and described in my report. As I have in that report fully explained the plan, stated the cost, &c. it is not necessary to repeat it again, but notice some of his erroneous assertions relative to it. He states "that any competent Engineer must know that a ditch 10 feet in width at the bottom to discharge 4000 feet of water per minute, must be of such a descent as would give to the water passing down, a velocity that would tear away the bottom and sides." The first inquiry to be made relative to this matter is, what descent is required? By an examination of the formulæ laid down by Eytelwin, and tested by Bidone of Turin, and which I believe is generally adopted by *all competent Engineers*, it will be seen that

it will be seen that a ditch of the above description, in order to discharge 4000 cubic feet of water per minute, the water to be 3 feet in depth, will require less than 1 foot fall per mile—the velocity would be nearly 18 1-2 inches per second. Now I presume any person of common understanding, can perceive, without the aid or information of an Engineer, that a fall of one foot in a mile is not likely to produce any of the results Mr. Malin alludes to. The fall in the Ohio River, from Beavertown to Wellsville, is about one foot per mile, and its bottom and sides are not torn away. The fall in the middle fork of Little Beaver is about 12 feet per mile, but we find the stream still retains a bottom and sides, and that they have sustained but little injury. The fall in Sandy Creek is 7 1-4 feet per mile, and its banks in the highest floods, are but slightly injured. The fall in the Still Fork of Sandy Creek, which stream is well known to most of the western stockholders, is 2 feet per mile, and the stream is exceedingly sluggish in its current. Then how preposterous and ridiculous in him to make such a statement? Can he believe that “reflecting men” are to be duped by such false and irrational assertions?

Mr. Malin also states, that by making the ditch, the company will be subjected to the payment of ten or fifteen thousand dollars damages, for injury done to town lots. This is even more extravagant than his assertion relative to the velocity of the water in the ditch. It is generally known, I believe, that it is not intended to construct an entirely new ditch, but to enlarge the present head race, which is about six feet wide. Now is it probable that the addition of 4 feet to the width of the head race, (no buildings being at all interfered with) will cause any serious injury to the *town-lots*?

He states that the present proprietors of the Hanover mill, knew, when they purchased that property, that the eastern streams would be cut off.—They were aware of no such thing, they had frequent assurances to the contrary, and Mr. Malin himself made an assertion of that description, to a former owner of that property, (see certificate E.)

He attempts to induce a belief, that the mill and water are of but little value, and states that a former owner offered to sell the water for \$150, and could not obtain it. The value of the mill and the town lots, does not appear to be estimated by the same scale, “but all is yellow to the jaundiced eye.” Mr. William Rhodes testified on his examination relative to the value of the mill, in August last, that it was worth \$2000

Mr. Malin states that I altered the dimensions of the Canal and lifts of the locks, substituted reservoirs instead of a steam engine to supply the summit, and intimates that the increased cost of the work, is to be attributed to those changes. Now the facts are, that the Canal has been *diminished* two feet in width [in deep cutting.] The locks have been diminished in number, and there are now 9 locks less on the line than proposed by Douglass. That the cost of the work has not been increased by substituting reservoirs for an engine feeder, is evident from the following statement of the cost of each.

Douglass in his report estimates the engine feeder at	\$31,000
and Davis' Branch feeder at about	18,000

Total,	\$49,000
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The West Fork Reservoir, mound, &c. will cost \$41,000,

The Cold Run Reservoir, mound, &c. \$9,000, making in all \$50,000—



or \$1000 more than the engine feeder, which would require for repairs, &c. a large sum annually.

Mr. Malin expresses surprise that the Eastern division of the line should cost more than double his or Douglass' estimate, and endeavors to attribute it to "alterations and changes in the plans of different parts of the work." What those alterations and changes were, and that they amounted to but \$2813. 90, will be seen by reference to certificate marked L, which also proves clearly that the work was judiciously located, and has been economically and permanently constructed. Then the question presents itself, to what cause is this great discrepancy between the actual and estimated cost of the work to be attributed? My reply is that fifty per cent of the enhanced cost was caused by the rise in the price of provisions and labor, the remainder is chargeable to ignorance or intentional deception on the part of the Engineer who made the estimate. That I am correct in this assertion, will be seen by reference to Douglass' estimate of the cost of the line from the mouth of Little Beaver Creek to the Beaver River, which is about \$70,000, including the lockage, or five thousand dollars per mile, and which cannot be constructed, under the most favorable circumstances, for less than *nearly four times that sum*. Mile number 8, in Douglass' estimate of the cost of the Middle division is termed "deep cutting, part rock," and estimated at \$39,351. This mile of deep cutting, part rock, is at the apex or comb 76 feet above canal bottom; and in order to save the great expense of such a cut, I deemed it advisable to make a tunnel one quarter of a mile in length. The tunnel and cuts at each end embraced by mile 8, cannot be completed at a less cost than \$100,000. Had a deep cut as proposed by Douglass been adopted, the excavation on the present level would have amounted to 480,000 cubic yards, part rock, and a large portion slate, the removal of which would have cost at least \$144,000, *or three and one half times* the amount estimated. Is it then a matter of surprise, that the Eastern division from New Lisbon to the Ohio River, should cost more than double Major Douglass' estimate? or is it to be wondered at that the summit, after an alteration diminishing its cost upwards of one hundred thousand dollars, should still cost three hundred thousand dollars more than the estimate? and is not the inference irresistible, that the sophism which led to the marking of the incorrect cutting at Hanover, has also been resorted to in forming this illusive estimate?

Mr. Malin insinuates that an investigation of the affairs of the Company was refused the Stockholders. Now the facts are, that the Directors and Officers of the Company courted investigation, and a resolution to that effect was transmitted to the Eastern Stockholders, By the Board, early last winter, in accordance with which an agent was appointed by them for that purpose, who examined the line and the books and documents of the company minutely, last June, and made a favorable report in relation to the various matters submitted for his inquiry. This gentleman had the advantage of having placed in his possession, nine pages of Mr. Malin's charges and complaints.

I have now replied to the most important parts of Mr. Malin's charges and statements, and have confined myself, in refuting them, to facts which can at any moment be corroborated. In performing this duty, I have endeavored to divest myself of all private pique or feeling, and have "laid

down nought in malice." If I have exhibited Mr. Malin's portraiture in a disagreeable light, the likeness is, nevertheless, correct: a refutation of his attack upon me, required that the curtain should be raised.

E. H. GILL.

*New Lisbon, Sept. 28, 1837.*



# CERTIFICATES.

## CERTIFICATE A.

This is to certify that several miles of the Sandy and Beaver Canal, east of New Lisbon, were located by Joshua Malin prior to E. H. Gill's taking charge of the line, that by Mr. Malin's location, sections 17 and 19 were Canal sections, and that Mr. Gill changed and made them slack water sections, thereby avoiding heavy rock excavation and an insecure and heavy embankment in the creek. I am fully of opinion that Mr. Malin's location of section 17 would have caused it to cost twice as much as it has cost as located by Mr. Gill, and that the work as located on section 19 by Mr. Gill, has reduced the cost of that section two-thirds.

Sept. 26th, 1837.

JOHN EATON, *Canal Contractor.*

## CERTIFICATE B.

This is to certify that the amount of money expended on the Western division of the Sandy and Beaver Canal, in consequence of changes made in the location or plan, would not exceed nine hundred dollars, seven hundred of which were expended on a portion of the line East of Minerva, and which had been located by Mr. Malin prior to E. H. Gill's taking charge of the work, and which location was altered afterwards by Mr. Gill.

Sept. 27th, 1837.

ROGER MORLEDGE, *Engineer.*

## CERTIFICATE C.

This is to certify that in the month of July 1836, I measured the work done by Messrs. Stewart & Mears on the Western deep cut of the Sandy and Beaver Canal, and discovered that said work had been over-estimated, or over-measured by Joshua Malin, Assistant Engineer, the month previous, to the amount of about fifty thousand cubic yards or about eight thousand dollars, which money had been paid to said Stewart & Mears in consequence of said Malin's over-estimate: and I further certify, that on discovering said error or over-estimate in the measurement, I stated the case to Mr. Malin, Assistant Engineer, who said he was aware of it, and had made said erroneous estimate intentionally. I further certify that at another period I measured an embankment made by Wm. McKenzie, which had been previously measured under the direction of said Malin, and I discovered that said embankment had been over-estimated or over-measured by said Malin to the amount of about five thousand cubic yards, and the contractor paid in consequence thereof, for said 5000 cubic yards which he had not done. I further certify that I have been employed on the line of the Sandy and Beaver Canal nearly three years, that during that period said Mr. Malin has had at all times a sufficiency of competent assistants in his party to make the various measurements and perform the various duties required of him as Assistant Engineer.

Sept 26th, 1837.

LOT DIXSON, *Engineer.*

## CERTIFICATE D.

NEW LISBON, September 26th, 1837.

*Dear Sir*—You have requested me to state the conversation which took place between Mr. Joshua Malin and myself on the evening myself and others waited on you at his request.

Mr. Malin and myself were conversing on the subject of his being dismissed by you, as an Engineer in the employ of the Directors of the Sandy and Beaver Canal Company: He expressed himself as feeling much agrieved at the course pursued towards him. A suggestion was made whether he would consent to take his former station, if you would take him under your employ again, he replied he would, and thought if some of his friends would see you, a reconciliation might take place.

I consented to be one, and Mr. Holland Green and Joshua Hanna were named as others. Mr. Malin brought Mr. Green to my store, and we walked over to Mr. Hanna's store; not finding him in, his brother Dr. Leonard Hanna consented to accompany us; we found you in your office and mentioned the subject, you declined at once having him under your employ again. So far as I recollect this is the substance of the transaction.

Very respectfully, your ob't servant,

DAVID BEGGES.

E. H. GILL, Esq., Chief Engineer of the Sandy and Beaver Canal.

As one of the persons named in the above communication as having called upon E. H. Gill, Esq. for the purpose of procuring a reconciliation between Joshua Malin and said Gill, concur in the above statements as far as they came under my observation.

LEONARD HANNA.

#### CERTIFICATE E.

NEW LISBON, Oct. 2d, 1837.

*Dear Sir*—In answer to your note of the 26th ult. requesting me to state in writing a conversation between Joshua Malin and myself respecting the waters of the Hanover mill, I state that on the day of the first election of Directors of the Sandy and Beaver Canal Company at Hanover in July 1834, Mr. Malin and myself took a walk to a tree near the South end of the town and near the line of Canal, on which tree there was a "bench mark." Mr. Malin there explained to me the depth of the cutting of the Canal at that place. What he represented the depth to be I do not now recollect. I enquired particularly of Mr. Malin if the water of the mill which then came from Brown's and Eberhart's runs would not be cut off by the Canal; he answered me it would not. The reason why I so well recollect this answer is this: I had some time before that sold the mill on a credit, and had not at the time of the conversation received any pay, and was apprehensive that if the water from those runs were to be cut off, the purchaser would never pay me. After Mr. Malin gave me that assurance, I remained perfectly satisfied. I have since received the consideration money in full and have no interest in the matter.

On referring to the deposition of Mr. Malin, taken before Squire Craig, and written down by myself at the time of taking, I find he stated in reference to the deep cut at Hanover: "the present level as finally fixed is four feet and forty hundredths higher than the level run by Gill and Hage."

Respectfully,

FISHER A. BLOCKSOM.

E. H. GILL, Esq.

#### CERTIFICATE F.

This is to certify that in the Fall of 1833, when the Philadelphia delegation reviewed the line of the Sandy and Beaver Canal, J. G. Williard, who had been employed as an assistant or surveyor in locating the line under Major Douglass, took a portion of said delegation and others to a point near the road below Benjamin Pettit's house and informed them that said point was the Western termination of the



summit level of said Canal, and I further certify, that to the best of my knowledge and belief from information obtained from various individuals conversant with the matter, the present Western termination of the summit level is not more than eight rods distant from the said point.

LEONARD HANNA.

New Lisbon, Sept. 25th, 1837.

#### CERTIFICATE G.

I hereby certify that in the Fall of 1833, when the Philadelphia Delegation reviewed the line of the Sandy and Beaver Canal, J. G. Williard who had been employed as an assistant or surveyor in locating said canal under Major Douglass, took a portion of said delegation and others to a point near the road West of Benjamin Pettit's house, and informed them that said point was the Western termination of the summit level of said canal: and I further certify that said point is the point Leonard Hanna alludes to in his certificate, and that said point is not more than eight rods distant in a northerly direction from the Western end of the summit level as now located.

CHARLES D. HOSTETTER.

#### CERTIFICATE H.

I hereby certify that in 1834, when Joshua Malin took E. H. Gill and H. Hago on to the summit of the Sandy and Beaver canal for the purpose of pointing out the line of said canal and giving them the requisite information as to bench marks, cutting, &c., he stopped with them on the Beaver dam meadows between my house and Cold Run on what I believed to be the lowest ground on my land where said canal is located, and then and there said that the place where he stopped or stood was *one foot* above top water line in said canal as located by him and Douglass, as I understood, or in other words, that the surface of the ground was one foot above top water line, and as the Canal was to have 7 feet in depth of water in it, said ground was 8 feet above canal bottom. I took particular notice of his statement, and cannot be deceived, as I was deeply interested in the matter, and wished the top water line kept below the surface of my meadows. As the canal is now located by said E. H. Gill at that place, the top water line I believe to be *three feet above* the surface of the ground.

JOHN J. BOWMAN

April 9th, 1837.

#### CERTIFICATE I.

I hereby certify that in September, 1834, when Messrs. Gill & Hago were about to commence the survey and examination of the summit of the Sandy and Beaver canal, the Engineer corps not being full, I assisted as rodman in running the line. When they were about to commence, Joshua Malin, who had been employed as an Engineer in running the line under Maj. Douglass, took them to the "Beaver dam" meadows, on Judge Bowman's place, and there pointed out the spot where we stood as being in their line, which he stated was one foot above the top water line of the canal, which was seven feet in depth. The commencement was then made according to this data, and the survey continued eastward, in the progress of which we met some bench marks of the former line, which coincided with the level then running to a fraction.

The cutting on the line as now located at the same point is about three feet, consequently the bottom of the present canal, which is four feet in depth, is about five higher than the bottom of Malin and Douglass' line.

New Lisbon, Oct. 3d, 1837.

CHARLES D. HOSTETTER.

## CERTIFICATE J.

*Extract of a letter from Mr. Hage.*

CHAMBERSBURG, Pa. July 28, 1837.

Dear Sir—Your favor of the 21st inst. has been received, requesting me to state what I recollect in respect to the location of the summit level of the Sandy and Beaver Canal, when we in conjunction examined during the fall of 1834 the supply of water it could command.

From the notes in my possession I see that we began our examination the 13th September of that year, in the "*Beaver Dam Meadows*," on Judge Bowman's farm, and extended our levels East and West, so that the *bottom of the summit and level of the canal would be eight feet below the surface of the ground at that point.*

If this location was afterwards established by you, there can be no doubt that you adopted the route pointed out to us by Mr. Malin, the former assistant of Major Douglass, as his location.

## CERTIFICATE K.

In the year 1834, while E. H. Gill and H. Hage were engaged in examining the summit of the Sandy and Beaver Canal, Mr. Gill informed me (as a Director of the canal company) that he had by his levels made an old bench mark on an Elm tree at Hanover nearly 23 feet above the bottom of the summit level as given him by Mr. Malin; that said bench was marked 11 and some parts of a foot (as appeared by the levels of Major Douglass) above canal bottom; he stated that on perceiving this very great difference in his level and that of Douglass' as exhibited by the above named bench mark, he asked Mr. Joshua Malin if there could be any mistake in his, Gill's level, (Mr. Malin was Douglass' assistant); Mr. Malin he said replied No, that he had made the bench the same, or nearly so, and that he thought the boys must have changed the mark or figures on it for mischief. Mr. Gill not being satisfied with Malin's reply mentioned the matter to me, and I being interested as a Director, requested from Mr. Malin a more satisfactory explanation. Mr. Malin expressly informed me that Mr. Gill's level was correct; that his and Malin's levels agreed at the Elm bench above named, but that he, Malin, had designedly and intentionally, marked the bench less than it should have been marked, for the purpose of deceiving the people of Hanover, because had they been aware of the real cutting there they would not have taken the same interest in the work that they did—he also stated that although the bench was marked erroneously, as above stated, that every cubic yard was calculated in the estimate, that would be in the canal by Mr. Gill's level, which made said bench about 23 feet above canal bottom.

New Lisbon, May 11, 1837.

ELDERKIN POTTER.

## CERTIFICATE L.

I certify that the entire amount of damages that was sustained on the Eastern Division of the Sandy and Beaver Canal, from the floods of the last winter and spring is \$1874.



I have been in the Engineer department of the said canal since the 15th of September, 1835, during all of which time, I have been engaged on the Eastern Division, and am acquainted with all alterations that have been made in the location of the line, or in the construction of the work on said division, all of which, that have in any manner increased the expenditure or cost of the work, are comprised in the following, viz:—An alteration in the height of the abutments of the bridge across Lock No. 30, on the Wells-ville road, which cost about \$20—the removal of the towing path bank on parts of sections No, 38 and 39, for which the contractors were paid \$330 90 cents, and the removal of the line from the south to the north side of the creek on section No. 56, at a time when no work had been done on said section, except the partial grubbing of 34 chains in length, and for which the contractor received \$68—making the total cost of alterations equal \$418.90. A change was also made in the location of dam No. 1, which cost about \$2000. This last alteration was made in pursuance of a resolution of the Board of Directors, in order to obviate the necessity of an interference with the mill privileges of Mr. Harbaugh.

It is decidedly my opinion, that in regard to economy, safety and permanency of the work, the locations on the Eastern Division, have been judiciously made, and that the mode of construction is as good as any other that could have been adopted.

New Lisbon, Sept. 27, 1837.

J. BRADLEY.

CERTIFICATE M.

I hereby certify, that I have carefully examined the Western Division of the Sandy and Beaver Canal with regard to the damages done by the floods, &c. and find the aggregate amount of gravel and sand washed from the upper levels to the lower levels to be 1120 cubic yards, which can be taken out at 30 cents per yard, making

Repairing bank,	\$336
Damage to waste weir at Minerva,	120
	130

Total, \$586

The above damages were chiefly owing to the works being abandoned, with the exception of the waste weir at Minerva.

ROGER MORLEDGE,  
*Assistant Engineer.*

Waynesburg, Sept. 30, 1837.

CERTIFICATE N.

This is to certify that the whole amount of damages sustained on the Middle division of the Sandy and Beaver Canal, by floods, is confined to the western deep cut alone:

LOT DIXSON,  
*Assistant Engineer.*

October 3d, 1837.

CERTIFICATE O.

This is to certify that I have a thorough knowledge of all the changes made in the location of the middle division of the Sandy and Beaver Canal

by direction of E. H. Gill, Chief Engineer, and that they could not in all have caused an expenditure exceeding two thousand two hundred dollars: one of those alterations causing an expenditure of seven hundred and ninety-seven dollars was west of Hanover, the line had been located and constructed nearly, before Mr. Gill took charge of the work by and under the direction of Joshua Malin and was *unnecessarily crooked*; Mr. Gill had a portion of the crooks and curves straightened, which caused the last named expenditure: The remaining fourteen hundred and three dollars were expended in some changes made in the plan of the line along the West Fork: the line originally had been located for a Canal, and after some work was done on it, it was thought advisable (as it would save a large amount of money in the cost of the construction, and make a more safe and permanent work,) to throw a mound across the valley of the West Fork at the Hanover road, and substitute slack-water for Canal from that point to Gillford: this plan was adopted and work commenced, when it was found necessary by the Directors to abandon it, a great excitement having arisen against it amongst the people residing in the vicinity, who feared it would create sickness.

LOT DIXSON.

Sept. 27th, 1837.